



UNITED STATES PATENT AND TRADEMARK OFFICE

di
UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,616	11/12/2003	Jing Huang	3533.1	2187
22886	7590	12/13/2007		
AFFYMETRIX, INC ATTN: CHIEF IP COUNSEL, LEGAL DEPT. 3420 CENTRAL EXPRESSWAY SANTA CLARA, CA 95051			EXAMINER SMITH, CAROLYN L	
			ART UNIT 1631	PAPER NUMBER
			MAIL DATE 12/13/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/712,616	Applicant(s) HUANG ET AL.	
	Examiner Carolyn L. Smith	Art Unit 1631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 10, 12-19, 21-27, 29-31 and 34 is/are pending in the application.
- 4a) Of the above claim(s) 23-25 and 34 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7, 10, 12-19, 21 and 22 is/are allowed.
- 6) ☒ Claim(s) 26-27, 29-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's amendments and remarks, filed 9/24/07, are acknowledged. Amended claims 1, 19, 26, and 30 and cancelled claims 8-9, 11, 20, 28, 32-33, and 35-39 are acknowledged. Claims 23-25 and 34 remain withdrawn due to being drawn to non-elected Groups.

Applicant's arguments, filed 9/24/07, have been fully considered but they are not deemed to be persuasive. Rejections and/or objections not reiterated from the previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

It is noted that instant claim 19 is missing the word "mean" in line 18; however, it is assumed that Applicant intended to delete this term in order to overcome the 35 USC 112, 2nd paragraph rejection of the limitation that contained this term. In the remarks section (page 16, first full paragraph) of Applicant's response, filed 9/24/07, Applicant states this limitation was amended to correct antecedent basis.

Claims 1-7, 10, 12-19, 21-22, 26-27, and 29-31 are herein under examination.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 26-27 and 29-31 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 26-27 and 29-31 are drawn to a method and computer software product comprising code for a method. A statutory process must include a step of a physical transformation, or produce a useful, concrete, and tangible result (*State Street Bank & Trust Co. v. Signature Financial Group Inc.* CAFC 47 USPQ2d 1596 (1998), *AT&T Corp. v. Excel Communications Inc.* (CAFC 50 USPQ2d 1447 (1999))). In the instant claims, there is no step of physical transformation, thus the Examiner must determine if the instant claims include a useful, concrete, and tangible result.

In determining if the claimed subject matter produces a useful, concrete, and tangible result, the Examiner must determine each standard individually. For a claim to be “useful,” the claim must produce a result that is specific, and substantial. For a claim to be “concrete,” the process must have a result that is reproducible. For a claim to be “tangible,” the process must produce a real world result. Furthermore, the claim must be limited only to statutory embodiments.

In the instant case, claims 26-27 and 29-31 do not produce a tangible result. A tangible result requires that the claim must set forth a practical application to produce a real-world result.

The method and computer software product comprising code for a method are drawn to computational steps that do not include a real world result. For example, methods as claimed may take entirely within the confines of a computer or human mind without any communication to the outside world. Instant claim 26 recites "identifying at least one contiguous stretch of homozygous SNP genotype calls"; however, this may take place within the confines of a computer. Instant claim 30 recites code for "inputting"; however, this inputting may take place solely within the confines of the computer. Instant claim 30 continues with code for estimating the copy number of a SNP, but does not recite communicating this information to the outside world. A tangible requirement requires that the claim must set forth a practical application of the computational steps to produce a real-world result. No practical result is recited in these claims; thus instant claims 26-27 and 29-31 do not include any tangible result.

Because claims 26-27 and 29-31 do not recite communication of a result in a tangible form to one performing the method or using the computer software product, the claims are not statutory. This rejection could be overcome by amending the claims to recite that a result of the method or coded steps is outputted to a display or by including a physical transformation (provided there is adequate written support in the originally filed application).

It is noted that instant claims 1 and 19 and dependent claims therefrom are considered to be statutory subject matter because they recite physical transformation limitations in the form of laboratory steps (i.e. hybridizing and measuring steps).

Application/Control Number:
10/712,616
Art Unit: 1631

Page 5

Conclusion

Claims 1-7, 10, 12-19, 21-22 are allowed.

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the PTO Fax Center. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993) (See 37 CFR §1.6(d)). The Central Fax Center number for official correspondence is (571) 273-8300.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carolyn Smith, whose telephone number is (571) 272-0721. The examiner can normally be reached Monday through Thursday from 8 A.M. to 6:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marjorie Moran, can be reached on (571) 272-0720.

November 28, 2007

/Carolyn Smith/
Primary Examiner
AU 1631